Begin

Reel #283
Kuzovkov, A.g.

KUZOVKOV, A.G.; KURTSIN, I.T.

Permeability of the hematoencephalic barrier in experimental neurosis. Nauch. soob. Inst. fiziol. AN SSSR no.1:102-103 '59. (MIRA 14:10)

1. Laboratoriya kortiko-vistseral'noy patologii i Kafedra normal'noy fiziologii Voyenno-meditsinskoy akademii imeni S.M.Kirova (zav. - I.T.Kurtsin).

(BRAIN)

KUZOVKOV, A.G.

USSR / Human and Animal Physiology (Normal and Pathologi-   T
cal). Effect of Physical Factors. Ionizing Irradia-
tions.

Abs Jour: Ref Zhur-Biologiya, No 21, 1958 98039

Author   : Kuzovkov, A. G.

Inst   : Military Medical Academy

Title   : Changes of Optical Density of Blood Serum and
Superior Nervous Activity in Dogs with Acute Radia-
tion Sickness

Orig Pub: Tr. Voyen.-med. akad., 1957, 74, 35-42

Abstract: In dogs with parotid gland fistula, a dynamic stere-
otype of positive and inhibitive conditioned refle-
xes was worked out: in three on acid, in the fourth
on alimentary reinforcement. After general irradia-

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112

ACCESSION NR: AT3012861   S/2970/61/000/000/0190/0202

AUTHORS: Kurtsin, I. T.; Kuzovkov, A. G.

TITLE: Permeability of the hemato-encephalic barriers in dogs affected by neurosis and by radiation sickness

SOURCE: Gisto-gematicheskiye bar'yery*: trudy* soveshchaniya, 25-28 maya 1960 g., Moscow, 1961, 190-202

TOPIC TAGS: hemato encephalic barrier, histo hematic barriers, dogs, dogs with conditioned neurosis, dogs with radiation sickness, barrier permeability

ABSTRACT: Permeability of the hemato-encephalic barrier and the state of the higher nervous activity of animals affected with neurosis and the radiation sickness (250 r of x-rays) were studied in parallel experiments on dogs with elaborate exteroceptive salivary conditioned reflexes. The permeability was determined with P^{32} as

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ACCESSION NR: AT3012861

radioactive tracer. Drastic changes in the conditioned reflex activity, mainly with predominance of the inhibitory process and the presence of the hypnotic phases, were observed in neurotic dogs. In addition to the disorders of cerebral activity, mainly increases in permeability of the hemato-encephalic barrier were noted. In some animals these changes occurred immediately after derangement of the higher nervous activity, and in others within a week time and lasted 1--3 months. The dynamics of permeability changes of the hemato-encephalic barrier shows a correspondence with the course of radiation disease, increasing during the latent period of the disease, decreasing in two or three dogs at the climax, and showing during the recovery period a wave-like restoration to the initial permeability leve. A definite parallelism has been noted between the changes in the higher nervous activity and in the permeability of the hemato-encephalic barrier of the experimental dogs. Orig. art. has: 6 figures and 3 tables.
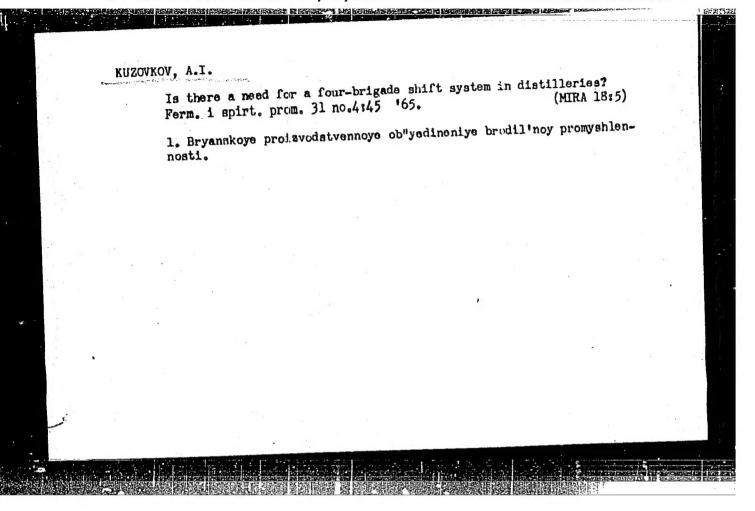
Card 2/3

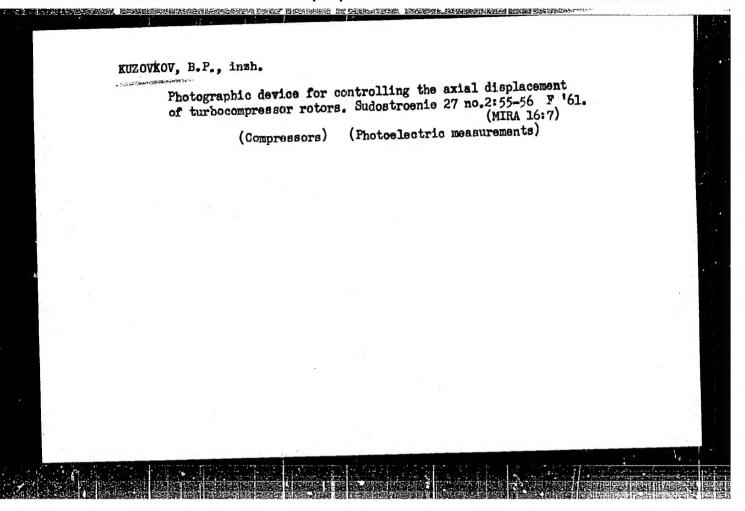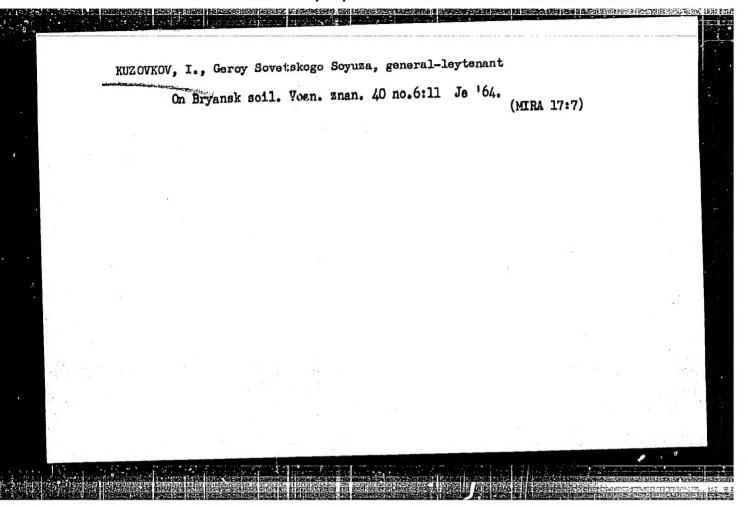ACCESSION NR: AT3012861

ASSOCIATION: Laboratoriya kortiko-vistseral'noy patologii in-ta fiziologii AN SSSR (Laborat. Cortico-visceral Pathology, Physiology Inst. AN SSSR); Kafedra normal'noy fiziologii Voyenno-meditsinskoy akad. im. S. M. Kirova, Leningrad (Dept. Normal Physiology, Military-Medical Academy)

SUBMITTED: 00

DATE ACQ: 12Jul63

ENCL: 00

SUB CODE: BC

NO REF SOV: 014

OTHER: 003

Card 3/3

KUZOVKOV, A.I.

Is there a need for a four-brigade shift system in distilleries?
Ferm. i spirt. prom. 31 no.4:45 '65.   (MIRA 18:5)

1. Bryanskoye proizvodstvennoye ob"yedineniye brodil'noy promyshlen-
nosti.

KUZOVKOV, B.P., inzh.

Photographic device for controlling the axial displacement
of turbocompressor rotors. Sudostroenie 27 no.2:55-56   F '61.
(MIRA 16:7)

(Compressors)   (Photoelectric measurements)

KUZOVKOV, I., Geroy Sovetskogo Soyuza, general-leytenant

On Bryansk soil. Voen. znan. 40 no.6:11 Je '64.

(MIRA 17:7)

RUZOVKOV, I.T. (Moskva)

Approximate method for the investigations of linear systems with varying parameters. Izv. AN SSSR, Otd.tekh.nauk, Energ. i avtom. no.2:60-64 Mr-Ap '59.   (MIRA 12:7)
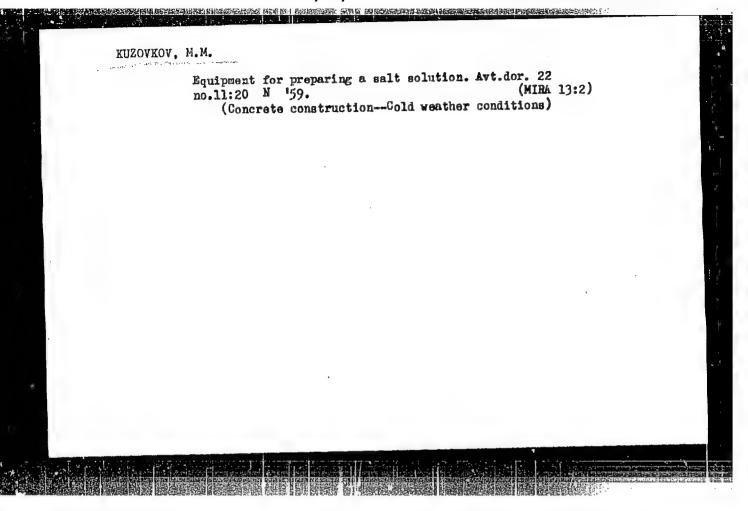(Automatic control)

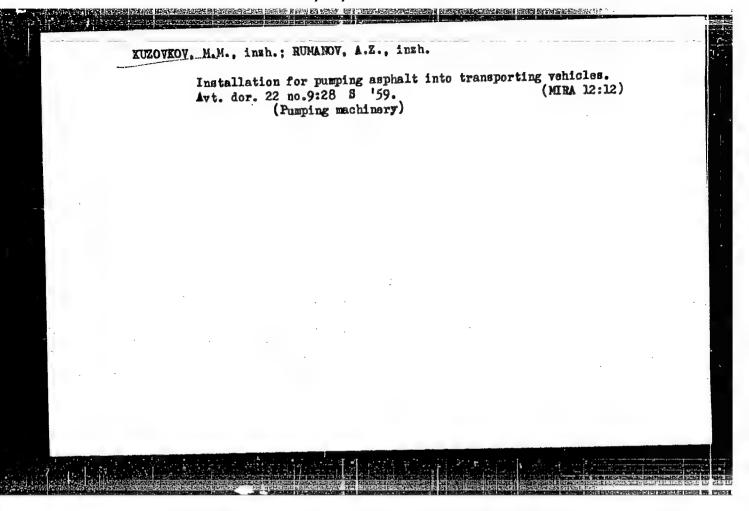KUZOVKOV, M.M., otv.za vypusk; DONSKAYA, G.D., tekhn.red.

[Progressive practices in road-building organizations] Pere-
dovoi opyt v dorozhnykh organizatsiiakh. Moskva, Nauchno-tekhn.
izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR.
No.5. [Building reinforced concrete bridges and manufacturing
pipes] Opyt stroitel'stva zhelezobetonnykh mostov i trub. 1959.
52 p.   (MIRA 12:12)
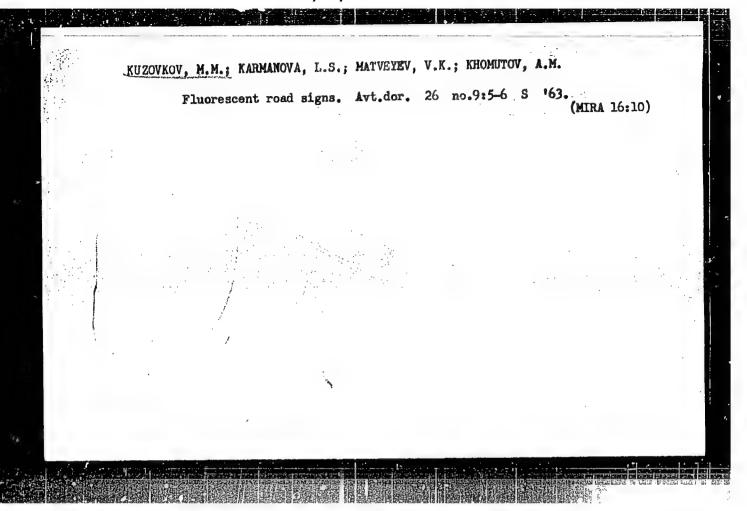
1. Moscow. Vsesoyuznyy dorozhnyy nauchno-issledovatel'skiy insti-
tut.
        (Bridges, Concrete)   (Pipe, Concrete)

KUZOVKOV, M.M.

Equipment for preparing a salt solution. Avt.dor. 22
no.11:20 N '59.   (MIRA 13:2)
    (Concrete construction--Cold weather conditions)

KUZOVKOV, M.M., inzh.; RUMANOV, A.Z., inzh.

Installation for pumping asphalt into transporting vehicles.
Avt. dor. 22 no.9:28 S '59.   (MIRA 12:12)
          (Pumping machinery)

KUZOVKOV, M.M.; KARMANOVA, L.S.; MATVEYEV, V.K.; KHOMUTOV, A.M.

Fluorescent road signs. Avt.dor. 26 no.9:5-6 S '63.

(MIRA 16:10)

KUZOVKOV, N. T.

Coauthor with B. V. Bulgakov of "Accumulation of Disturbances in Linear Oscillatory Systems with Variable Parameters", Nauch-Tekh Sbor NII MPSS, 6, 1950 -- PMiM 1/56, 147.

Scientific Research Institute, Ministry of Communications Equipment Industry
    (NII Ministerstvo Promyshlennosti Sredstv Svyazi)

KUZOVKOV, N. T.

Bulgakov, B. V., and Kuzovkov, N. T. On the accumulation of disturbances in linear systems with varying [coefficients.]

[...] 12 (1950) [Russian]

[...]

$$x = y + \int [\ldots]$$

whence

$$\|x\| \leq \|y\| + \int_0^t \| Y(t)\, Y^{-1}(t_1) \| \, \|x(t_1)\| \, dt_1,$$

where we set $\|y\| = \sum_i |y_i|$, $\|A\| = \sum_{ij} |a_{ij}|$, if y has the components y_i, A the elements a_{ij}. The difficulty lies in [the]

amount of numerical calculation. If $F(t)$ is a constant matrix, [...]

authors divide the t-range into intervals $[0, t_1]$, $[t_1, t_2]$, and so on, and take $F(t)$ constant and equal to $F(t_i)$ in the ith interval. Numerical examples are given.   *R. Bellman.*

KUZOVKOV, N.T.

Use of logarithmic frequency characteristics for the evaluation
of attenuation in control systems. Avtom. i telem. 15 no.4:325-
331 Jl-Ag '54.   (MLRA 7:11)
     (Electric control) (Automatic control) (Mathematical physics)

Kuzovkov, N. T.

Kuzovkov, N. T. Investigation of the stability of systems with oscillating links by the method of logarithmic frequency characteristics. Univ. Uč. Zap. 172 (1954), Meh. 5, 207-213. (Russian)

1 - F/II

Kuzovkov, N. T.

Kuzovkov, N. T. The formation and transformation of structure schemes for systems of automatic regulation. Moskov. Gos. Univ. Uč. Zap. 172 (1954), Meh. 5, 215–225. (Russian)

1 – P/W

USSR/Electricity - Regulation stability *Kuzovkov, N. T.*   FD-1668

Card 1/1   Pub. 10-4/11

Author   : Kuzovkov, N. T. (Moscow)

Title   : Generalization of the amplitude-phase criterion of stability to systems
             with undamped oscillatory circuits

Periodical : Avtom. i telem., Vol. 16, 43-46, Jan-Feb 1955

Abstract   : The author generalizes the amplitude-phase criterion to systems containing
             undamped oscillatory circuits, i.e. circuits whose transfer functions pos-
             sess conjugate complex poles arranged on the imaginary axis. He points
             cut the possibility of application to the indicated systems of the method
             of logarithmic frequency characteristics. Three references: James, Nic-
             hols, and Phillips, Theory of Servomechanisms (translated into Russian
             under the title 'Theory of tracking systems'), Foreign Literature Press,
             1951. V. V. Solodovnikov, "Method of analysis of the quality of automatic
             regulation systems," Trudy MVTU imeni Bauman (Works of the Moscow Higher
             Technical School), Nos 1 and 2, 1949. Ya. Z. Tsypkin, "Supplement to the
             Book of G. Lauer, S. Lesnik and L. Madson, "Principles of the Theory of
             Servomechanisms'," State Power Press, 1948.

Institution : --

Submitted   : December 12, 1953

Kuzovkov, N.t.

SUBJECT   USSR/MATHEMATICS/Applied mathematics   CARD 1/1   PG - 890
AUTHOR   KUZOVKCV N.T.
TITLE   On an estimation of the accumulation of errors in linear
              systems with the aid of logarithmic frequency characteristics.
PERIODICAL   Vestnik Moskovsk Univ. 11, 1, 33-39 (1956)
              reviewed 6/1957

At the example of the gyroscope stabilizer the author shows how the maximally
possible error of the device can be determined if the two moments of
disturbance which act around the two gyroscope axes, are bounded with respect
to the amount. After having established a structural image the author obtains
the transition functions with the aid of logarithmic frequency characteristics.
For a suitable transformation of the structural image this often can be made
by models or nomograms. From the transition function (= reaction of the
system to a unit jump in the entrance) obtained thus, the curve of the
maximally possible error can easily be obtained.graphically if the moments
of disturbance each have its maximal amount and a reversion of the sign is
carried out always at the zeros of the transition function. The curves
obtained thus, give the maximally possible error of the system as a
function of the time; the course of it is monotone.

chair applied mechanics, Moscow Univ.

| SUBJECT | USSR/MATHEMATICS/Applied mathematics | CARD 1/1 | PG - 153 |

AUTHOR   KUZOVKOV N.T.

TITLE   The construction of regions of stability and of equal-damping lines by means of the method of logarithmic frequency characteristics.

PERIODICAL   Avtomat. Telemech. 17, 173-179 (1956)
reviewed 7/1956

The stability of the roots of the characteristic equation of a control system $P(p) + \mu Q(p) = 0$ shall be investigated for a rational functions $P(p)$ and $Q(p)$ in dependence of a regulating parameter μ. If P and Q are of higher degree, then the method of the D-composition (e.g. Ajserman, Theory of automatic control of motors, Moscow 1952) becomes very complicated. The author gives a graphical method which permits to solve such problems quicklier than with the D-composition. Therefore in $\mu = -P(p)/Q(p)$ the numerator and denominator are decomposed in a suitable manner such that with models and nomograms the limits of stability in a complex μ-plane can be approximated easily. With this method also the influences of the damping can be considered.

Kuzovkov, Nikolay Timofeyevich

Kuzovkov, Nikolay Timofeyevich

Teoriya avtomaticheskogo regulirovaniya, osnovannaya na chastotnykh
metodakh   (Theory of Automatic Control Based on Frequency Methods)
Moscow, Oborongiz, 1957. 245 p.

Supplement: Shablony i nomogrammy (Patterns and nomographs)
7,000 copies of each printed.

Reviewer: Dobrogurskiy, S. O., Doctor of Technical Sciences,
Professor; Ed.: Dulin, V. N., Candidate of Technical Sciences;
Ed. of Publishing House: Petrova, I. A.; Technical Ed.:
Rozhin, V. P.; Managing Ed.: Sokolov, A. I., Engineer.

PURPOSE: This monograph is addressed to engineering and technical
workers who are concerned with problems of automatic
control. It will also prove of value to students special-
izing in this field.

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Theory of Automatic Control Based on Frequency Methods   354

COVERAGE: The monograph surveys frequency methods in the analysis
and synthesis of follow-up and control systems which can
be described by linear differential equations having
constant coefficients. The main purpose of the book is
to acquaint the reader with the logarithmic frequency
characteristics method, and to familarize him with its
applications in research on the stability and quality of
control, the nature of transient processes, the synthesis
of stabilizing links, etc. This method is a further
development of A. V. Mikhaylov's contributions to the theory
and has been basically elaborated in the last ten years by
V. V. Solodovnikov and his colleagues and by non-Soviet
scientists. The advantage of the method is that in system
analysis, labor-consuming calculations can be replaced by
simple graphic representations. The method also consider-
ably lightens the task of follow-up and control-system
synthesis. A knowledge of operational calculus (Laplace
transform) and the ability to solve differential equations
with constant coefficients are required, in order to under-
stand this book. Special attention is devoted to the graphic

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Theory of Automatic Control Based on Frequency Methods   354

representation of calculation methods and nomographs and tables
are given. The author expresses his gratitude to Dobrogurskiy, S.O.
who reviewed the manuscript of the book and made several valuable
observations. There is a bibliography of 33 entries, 24 of which
are Soviet, 4 translations, and 5 in English.

TABLE OF
CONTENTS:

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Theory of Automatic Control Based on Frequency Methods   354

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AVAILABLE: Library of Congress

Card 8/8   JJP/vm
                                 6-23-58

Kuzovkov, N. T.

PHASE I BOOK EXPLOITATION   376

Avtomaticheskoye upravleniye i vychislitel'naya tekhnika, vyp. 1.
(Automatic Control and Computing Technique, v. 1) Moscow,
Mashgiz, 1958.   302 p.   7,000 copies printed.

Ed.: Solodovnikov, V.V., Doctor of Technical Sciences, Professor;
Scientific Ed. of Publishing House: Polyakov, G.F.; Tech. Ed.:
Sokolova, T.F.; Managing Ed. for Literature on Machine Building
and Instrument Making (Mashgiz): Pokrovskiy, N.V., Engineer.

PURPOSE: The book is intended for engineers and scientific person-
nel.

COVERAGE: The book is a collection of eleven articles presented at
a seminar on the theory and technique of automatic control and
computing machines. The seminar was organized by the Scientific
and Technical Society of Instrument Making, the Moscow Higher

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Automatic Control and (Cont.)   376

   Technical School imeni Bauman, and the Moscow Aviation Institute
   imeni S.Ordzhonikidze. The Moscow Physics and Engineering In-
   stitute also participated in the seminar. , The first five arti-
   cles outline the theory of automatic control, the next four de-
   scribe automatic control systems and system components, and the
   last two articles discuss differential analyzers. No person-
   alities are mentioned.

TABLE OF CONTENTS:

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AVAILABLE: Library of Congress

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JP/mfd
1-19-59

8(0)

SOV/112-59-4-7471

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 145 (USSR)

AUTHOR: Kuzovkov, N. T.

TITLE: Some New Applications of the Method of Logarithmic Frequency
Characteristics to Investigating Automatic-Control Systems

PERIODICAL: V sb.: Avtomat. upravleniye i vychisl. tekhn. Nr 1. M., Mashgiz,
1958, pp 100-133

ABSTRACT: Use of the method of logarithmic frequency characteristics in solving
a number of problems is pointed out. The problems are: (1) evaluation of
attenuation; (2) synthesis of the correcting sections that impart to a linear
system a predetermined attenuation; (3) constructing a D-partition of equal-
attenuation lines and a transient phenomenon on the basis of a semilogarithmic
real frequency characteristic; (4) some points in evaluating the accumulation
of perturbances in constant-parameter linear systems are broached. Twenty-
four illustrations. Bibliography: 19 items.

I. Ya. S.

Card 1/1

Kuzovkov, N. T.

AUTHOR: Kuzovkov, N. T. (Moscow).   24-1-6/26

TITLE: On the motion of a gyro-stabilised platform at large
           angles of deviation. (O dvizhenii girostabilizirovannoy
           platformy pri bol'shikh uglakh otkloneniya).

ABSTRACT: A platform stabilised about two axes by two gyroscope
           monitored servo power units is considered in this paper
           under conditions of motion when the angle between the
           platform and the external frame is no longer small, which
           was the limitation of earlier theory. The position of the
           platform axes and of the gyroscope axes is defined by four
           variables. By setting up the Euler equations for each
           of the constituent elements of the system, four equations
           are derived, which the motion of the system obeys. The
           equations are non-linear. For small deviations, linear
           equations can be substituted by a variational procedure.
           These equations can be represented by a circuit
           configuration diagram which, in turn, can be so transformed
           that cross-coupling terms are eliminated. In this manner
           it is shown that the equilibrium angle between the platform
    Card 1/2 and the external frame has a substantial effect on the

24-1-6/26

On the motion of a gyro-stabilised platform at large angles of deviation.

nature of the configuration diagram.
There are 6 figures and 3 references, all of which are Russian.

SUBMITTED: June 29, 1957.

AVAILABLE: Library of Congress.

Card 2/2

24(6),16(1)

AUTHOR: Kuzovkov, N.T.   SOV/55-58-6-4/31

TITLE: An Investigation Method for Control Circuits Containing Linear
             Terms with Variable Parameters (Metod issledovaniya sistem
             avtomaticheskogo regulirovaniya, soderzhashchikh lineynyye zven'ya
             s peremennymi parametrami)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya matematiki, mekhaniki,
             astronomii, fiziki, khimii, 1958, Nr 6, pp 19-30 (USSR)

ABSTRACT: Let it be possible to decompose a given control circuit into two
             connected blocks so that all terms of the first block have constant
             coefficients, while the terms of the second block are linear and
             have variable parameters. In a simple manner, for the second
             block which is assumed as one term, the author determines the
             "transfer function $A_{t_i}(p)$ in the moment t_i" for an impulse influence.
             The function $A_{t_i}(p)$ is identical with the transfer function of a
             term, the coefficients of which are constant and equal to the
             values of the corresponding variable coefficients. The knowledge
             of $A_{t_i}(p)$ enables to apply to the considered system the usual
             linear methods and to answer the

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An Investigation Method for Control Circuits Containing   SOV/55-58-6-4/31
Linear Terms With Variable Parameters

following questions: 1) whether the system fades or increases
in the moment t_j, 2) how large are the deviations of the single
variables in the moment t_i ?, 3) how large is the summed control
deviation in the moment t_i ?, 4) how large is the mean quadratic
deviation for stochastic influences?. An example is calculated.
The author mentions N.M.Krylov, N.N.Bogolyubov, and V.S.
Kulebakin.
There are 9 figures, and 7 references, 4 of which are Soviet,
and 3 English.

ASSOCIATION: Kafedra prikladnoy mekhaniki (Chair of Applied Mechanics)

SUBMITTED: August 8, 1958

Card 2/2

AUTHOR: Kuzovkov, N.T. (Moscow)

TITLE: On the Motion of a Gyrostabilised Platform in a Bicardan Suspension (O dvizhenii girostanilizirovannoy platformy, ustanovlennoy v bikardanovom podvese)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, 1958, Nr 7, pp 94 - 97 (USSR)

ABSTRACT: A bicardan suspension is an ordinary cardan suspension supplemented by a stirrup in which slides a rod which is firmly linked with the inner ring of the cardan suspension. The general theory of bicardan suspensions has been developed by Ishlinskiy and Chekhovich (Ref 1). In the present paper, on the basis of results of this theory, the equations of small oscillations of a gyrostabilised platform in a bicardan suspension about a position characterised by a large angle of deviation of the outside ring and stirrup are developed. A comparison is also made between these equations and those of the same platform in an ordinary cardan suspension. Comparison of the structural scheme of the platform in the bicardan suspension with that of the platform in the cardan suspension shows that the first system is distinguished from the second by the presence of

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SOV/24-58-7-15/36

On the Motion of a Gyrostabilised Platform in a Bicardan Suspension

additional connections and also by higher values for the moments of inertia, the coefficients of viscous friction and the coefficient $K_2^!$, defined in Eq (14). The additional connections may have a harmful effect on the stability of the system but a more definite conclusion about the influence of the stirrup structure on the stability of the platform can be made only as a result of analysis based on the use of numerical values for the parameters of the system. There are 2 figures and 2 Soviet references.

SUBMITTED: January 31, 1958

Card 2/2

AUTHOR: Kuzovkov, N. T. (Moscow)   SOV/24-58-11-16/42

TITLE: A Single-axis Power Gyro Stabilizer with the Axis of the
            Frame Set Obliquely (Odnoosnyy silovoy girostabilizator
            s kosym raspolozheniyem osi kozhukha)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh
            Nauk, 1958, Nr 11, pp 70-74 (USSR)

ABSTRACT: The system of coordinates etc. are shown in Fig.1; the
            y-axis (normal to the axis of rotation of the gyro) is
            set obliquely in the frame. The motion in a system of
            coordinates connected to the base is examined. The Euler
            equations for the gyro are Eqs.(1). The base is assumed
            fixed in the coordinate system; this gives Eqs.(2).
            Ishlinskiy's methods (Refs.1 and 2) are applied to give
            Equation (5), in which the torque applied by the stabilizer
            motor 4 is allowed for (this torque is assumed to follow
            the law given in Eq.(9), where K is the gain and f a
            viscous friction coefficient). The equation of slightly
            perturbed motion (11) is now derived; condition (12) must
            be fulfilled if the motion is to be asymptotically stable.
            The relation of restoring torque to displacement is now
    Card1/2 considered; it is shown that K, f and H cannot be increased

A Single-axis Power Gyro Stabilizer with the Axis of the Frame Set
Obliquely

without the system becoming unstable for various reasons,
but that the oblique position of the y-axis can make an
unstable system stable; Eq.(19) shows how K_2 varies as a
function of the angle γ of Fig.1; Eq.(18) is of course
just the open-loop transfer function. Eq.(16) gives the
value of γ which gives L maximal (i.e. the angle γ
which is optimal from the point of view of stability,
all other parameters remaining fixed).
There are 2 figures and 4 references, all of which are
Soviet.

SUBMITTED: April 5, 1958

Card 2/2

KUZOVKOV, N.T.

Method of analyzing automatic control systems containing linear
elements with varying parameters. Vest.Mosk.un.Ser.mat.,mekh.
astron.,fiz.,khim. 13 no.6:19-30 '58.   (MIRA 12:4)

1. Kafedra prikladnoy mekhaniki Moskovskogo gosudarstvennogo
universiteta.
                         (Automatic control)

ACHERKAN, N.S., prof., doktor tekhn.nauk; DOROSHKEVICH, A.M., kand.tekhn.
nauk; DROZDOVSKAYA, I.S., insh.; KUZOVKOV, N.T., kand.tekhn.nauk;
ARTOBOLEVSKIY, I.I., akademik, red.; IOVLEVA, N.A., tekhn.red.

[Automation in the machinery industry abroad; collected translations]
Avtomatizatsiia v mashinostroenii za rubezhom; sbornik perevodov.
Pod obshchei red. I.I.Artobolevskogo. Moskva, Izd-vo inostr.lit-ry,
1959. 321 p.   (MIRA 13:4)
     (Automation)   (Machinery industry)

AUTHOR: Kuzovkov, N. T. (Moscow)

TITLE: An Approximate Method of Studying Linear Systems with Variable Parameters (Priblizhennyy metod issledovaniya lineynykh sistem s peremennymi parametrami)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1959, Nr 2, pp 60-64 (USSR)

ABSTRACT: The paper deals with an automatic control system that can be considered as consisting of a fixed part and of several parts with variable parameters, which parts are described by simple linear differential equations and are lumped into one. The pulse transfer function is considered; the response to a pulse of arbitrary size and of the form shown in Fig 2 is defined by Eq (1) (if the parameters are fixed) and by Eq (2) (if the parameters are variable). Eq (3) results from using the principle of superposition, as does Eq (4); the two relate to the fixed and variable parts respectively. The subsequent argument is a simple application of stepwise approximation to the functions describing the variable part, whose parameters are considered as constant during any one time interval. The article concludes by pointing out that any calculation based on these methods must include as an essential part the usual operations of calculating the

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SOV/24-59-2-9/30

An Approximate Method of Studying Linear Systems with Variable Parameters

deviations produced by perturbations, the damping of shock-excited oscillations, and so on. The simplicity of the method presented in the paper is stressed. There are 4 figures and 5 references, of which 4 are Soviet and 1 is English.

SUBMITTED: October 14, 1958.

Card 2/2

KUZOVKOV, N.T. (Moskva)

Synthesis of automatic control systems by logarithmic root
hodographs and with generalized frequency characteristics.
Izv. AN SSSR. Otd. tekh. nauk. Energ. i avtom. no.5:136-146
S-O '59.   (MIRA 13:1)
                    (Automatic control)

S/024/59/000/06/015/028
E023/E235

AUTHORS: Belyaeva, G. M., and Kuzovkov, N. T. (Moscow)

TITLE: Transients in a Linear System Having a Pure Delay

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye
             tekhnicheskikh nauk, Energetika i avtomatika, 1959,
             Nr 6, pp 127-133 (USSR)

ABSTRACT: Kasters and Moore's method of logarithmic frequency
             characteristics is used to find the roots of the transcen-
             dental equation describing the system; the paper is an
             extension of the one by N. T. Kuzovkov (Nr 5, 1959).
             Some examples of transients are given to illustrate the
             method. There are 7 figures and 6 Soviet references.

SUBMITTED: July 23, 1959

Card 1/1

PHASE I BOOK EXPLOITATION   SOV/5258

Kuzovkov, Nikolay Timofeyevich

Teoriya avtomaticheskogo regulirovaniya, osnovannaya na chastotnykh metodakh
   (Theory of Automatic Control Based on Frequency Methods) 2d ed., enl. and rev.
   Moscow, Oborongiz, 1960. 445 p. Errata slip inserted. 11,000 copies printed.

Reviewer: S.O. Dobrogurskiy, Doctor of Technical Sciences, Professor; Ed.: M.N.
   Generozov, Engineer; Ed. of Publishing House: A.G. Belevtseva; Tech. Ed.: N.A.
   Pukhlikova; Managing Ed.: S.D. Krasil'nikov, Engineer.

PURPOSE: This book is intended for engineers and technicians concerned with the
   design of servo-and automatic control systems and for students specializing in
   the field.

COVERAGE: The book discusses modern methods of frequency analysis (as established
   by V.V. Solodovnikov) applied to servo-and control systems which can be de-
   scribed by linear differential equations with constant and variable coefficients.
   Methods of systems synthesis based on generalized frequency characteristics
   and logarithmic root hodographs are given. Applications of the theories dis-
   cussed to actual calculations are shown. In connection with this, the book

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Theory of Automatic Control (Cont.)   SOV/5258

includes reference material, e.g., Hurwitz' stability condition, the solution of algebraic equations, etc. Much attention is given to methods of setting up differential equations for automatic control systems (Ch. I). The second edition presents a fuller treatment of the frequency methods of analysis than the first edition, discussing the classical results of B.V. Bulgakov, A.Yu. Ishlinskiy, V.S. Kulebakin, and B.N. Petrov in the field of control from the point of view of frequency analysis. The new material is contained chiefly in Chapters VIII and IX (generalized frequency analysis) and X (engineering methods for investigation of linear systems with variable parameters). Section 3 of Ch. VIII treats the construction of root hodographs according to frequency methods. As in the first edition, the mathematical apparatus used is simple (differential equations with constant coefficients and Laplace transformation). Only in sections 3 and 4 of Ch. VII which treat the determination of transfer functions from experimental transient processes are the basic principles of matrix calculus used. The author thanks Professor S.O. Dobrogurskiy, Engineers V.I. Blinkov and M.N. Generozov, and Candidate of Physical and Mathematical Sciences I.T. Borisenok. There are 101 references: 82 Soviet (3 of which are translations from the English), 18 English, and 1 German.

Card 2/11

S/024/60/000/01/024/028
E081/E335

AUTHOR: Kuzovkov, N.T.   (Moscow)

TITLE: Transfer Function of a First-order Link with Linearly
             Varying Coefficients

ABSTRACT: A method given previously by the author, in issue Nr 2 of
          the journal, 1959, for finding the transfer function
          approximately by means of power-law approximations to the
          coefficients is improved by using the inverse pulse
          transfer function to find those coefficients without
          resort to those approximations. The argument relates to
          a link whose equation is Eq (1) (x is input, y is
          output and the other quantities are constants).
          Eq (2) is Eq (1) in general form, with (3) as definitions.
          The initial conditions are taken as being zero and it is
          assumed that $k(t) = b_0 + b_1 t$. The rest of the results
          are quoted from the previous paper (Ref 1) and the

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S/024/60/000/01/024/028
E081/E335

Transfer Function of a First-order Link with Linearly Varying
Coefficients

     treatment from Eq (6) onwards is simply a repetition
     of the earlier treatment (with less detail).
     There are 4 references, 1 of which is English and
     3 are Soviet.

SUBMITTED: November 3, 1959

Card 2/2

BORISENOK, I.T.; GENEROZOV, M.N.; YEREMEYEV, N.V.; KARAMYSHKIN,
        V.V.; KUZOVKOV, N.T.; BORISENOK, I.T.; KULIKOVSKAYA, N.V.;
        SAVINOV, G.I., kand.fiz.-mat. nauk, dots. [deceased];
        PIROGOV, I.Z.; Prinimali uchastiye: BALAYEVA, I.A.;BALAKIN,
        B.M.; BELYAYEVA, G.M.; BELYAKOV, V.I.; VELERSHTEYN, R.A.;
        ZHARKOV, G.M.; KOROLEVA, V.Ye.; LITVIN-SEDOY, M.Z.; POPOV,
        A.I.; PRIVALOV, V.A.; STUKALOVA, L.M.; CHISTYAKOV, A.I.;
        SAVVIN, A.B., red.; CHISTYAKOVA, K.S., tekhn. red.

[Laboratory work in theoretical and applied mechanics] Labo-
ratornyi praktikum po obshchei i prikladnoi mekhanike. Mo-
skva, Izd-vo mosk. univ. 1963. 233 p.   (MIRA 16:12)

1. Kafedra prikladnoy mekhaniki Moskovskogo gosudarstvennogo
universiteta (for Balayeva, Balakin, Belyayeva, Belyakov,
Velershteyn, Zharkov, Koroleva, Litvin-Sedoy, Popov, Privalov,
Stukalova, Chistyakov).
        (Mechanics—Laboratory manuals)

KUZOVKOV, N.T. (Moscow)

"Biaxial gyro-stabilized platforms on a moveable base".

report presented at the 2nd All-Union on Theoretical and Applied
Mechanics, Moscow, 29 Jan - 5 Feb 64.

L_0005_45   ...
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AEDC(a)/ESD(t)   BC

ACCESSION NR: AP4041971   S/0280/64/000/003/0174/0182

AUTHOR: Kuzovkov, N. T. (Moscow)   B

TITLE: Biaxial, gyro-stabilized platforms on a movable base

SOURCE: AN SSSR. Izv. Tekhnicheskaya kibernetika, no. 3, 1964, 174-182

TOPIC TAGS: automatic control, gyroscope, gyro stabilization, biaxial platform, gyro platform

ABSTRACT: Gyro-stabilized platforms can be constructed using either two single gyros or a gyro system of two coupled pairs, where coupling is either by means of gears or by an antiparallelogram. Since the four - gyro system is structurally much more complex and costly, it is of interest to compare the merits of the two systems. The comparison is based on range of angular stability and on the magnitude of induced oscillations caused by the motion of the base. The investigations are performed assuming that platform vibrations are small about an equilibrium point which is characterized by zero values of all angular velocities of the system. The equations of motion for a two-gyroscope system are taken from N. T. Kuzovkov (Izv. AN SSSR, OTN, 1958, No. 1). Using Kuzovkov's method and Euler's dynamic equations, the equations of motion for a gear-coupled 4 - gyro system are

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L 9095-65
ACCESSION NR: AP4041971

derived. Both systems of equations are then linearized by assuming small perturbations in angular orientation of the platform about the equilibrium point. The computations are greatly simplified because for the conditions assumed in the problem a biaxial platform which uses two coupled pairs of gyros can be regarded as a simple combination of two monoaxial gyro stabilizers (this is not true of the 2 - gyro biaxial platform) and, as far as stability is concerned, a platform on a movable base does not differ from a platform on a stationary base. Substituting a typical set of numerical values into the perturbation equations and applying the Ruth stability criterion, it is shown that the stable angular range of both systems is of comparable magnitude and that the four-gyro system does not offer any significant advantages in stability. When motion of the base is considered, then it is shown that the amplitude of the oscillations induced in the platform by this motion is greater for the 2-gyro system than for the 4-gyro system. This is considered to be one of the main advantages of the 4-gyro system. The above conclusions are based numerical example and are not general. Orig. art. has: 17 equations and a

ASSOCIATION: none

SUBMITTED: 27Sep63   ENCL: 00   SUB CODE: NG, RA

NO REF SOV: 003   OTHER: 000

Card 2/2

ACCESSION NR: AP4043898   S/0179/64/000/004/0143/0145

AUTHOR: Kuzovkov, N. T. (Moscow)

TITLE: A damped gyroscopic pendulum free of ballistic deviation

SOURCE: AN SSSR. Izvestiya Mekhanika i mashinostroyeniye, no. 4, 1964, 143-145

TOPIC TAGS: gyroscope, gyroscopic pendulum, pendulum, ballistic deviation, gyroscopic pendulum ballistic deviation, damped pendulum

ABSTRACT: A gyroscopic pendulum mounted on an object moving along the Earth deviates from the true vertical by an angle directly proportional to the velocity and acceleration of the moving object. The component directly proportional to velocity is the velocity deviation, while the acceleration component is the ballistic deviation of the gyroscopic pendulum. The latter deviation is equal to zero for any motion of the object along the surface of the Earth when the natural oscillations of the gyroscopic pendulum are not damped and the period is 84.4 minutes (Shuler stipulation). So far, such a gyroscopic pendulum has not been made, and would have only limited use due to the lack of damping of natural oscillations. The present article therefore proves the possibility of such a damped gyroscopic pendulum for the particular case of motion of an object with any

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ACCESSION NR: AP4043898

desired acceleration. For an object moving at a velocity much lower than the linear velocity of the Earth, the precession motion of the gyroscopic pendulum mounted on this object is described by the following:

$$\beta' + \left(k + U \sin \varphi + \frac{v_E}{R} \operatorname{tg} \varphi\right) a + \frac{v_N}{R} = k \frac{V_E}{g}, \qquad V_E = RU \cos \varphi + v_E$$

$$-a' + \left(k + U \sin \varphi + \frac{v_E}{R} \operatorname{tg} \varphi\right) \beta - \frac{V_E}{R} = k \frac{v_N}{g}, \qquad k = \frac{Pl}{R} \qquad (1)$$

It is then assumed that a platform is placed on the object, stabilized horizontally and in the North-South direction, and that a gyroscopic pendulum is installed on the platform. The article shows that a damped gyroscopic pendulum may be made when the object moves along a parallel of the Earth and:

$$k\,(k + U \sin \varphi) = v^2 \qquad (2)$$

A platform stabilized in the East-North-zenith directions with an installed damped gyroscopic pendulum may constitute a stabilized double-axis gyroscopic platform corrected in relation to the vertical by the gyroscopic pendulum. The platform will be

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ACCESSION NR: AP4043898

stabilized automatically in relation to the points of the compass if the longitudinal axis of the object is sufficiently well stabilized in relation to the East-West direction. Thus, an object with a platform may move at any acceleration. In this case, the gyroscopic pendulum correcting the stabilized platform with the gyroscope damped northward on the suspension axis will not have ballistic or any other deviations (except for velocity deviations) when the parameters are selected according to M. Shuler. Orig. art. has: 6 equations.

ASSOCIATION: none

SUBMITTED: 26Feb64   ENCL: 00

SUB CODE: NG   NO REF SOV: 002   OTHER: 000

Card 3/3

KUZOVKOV, N.T.   (Moskva)

Damped gyroscopic pendulum without ballistic deviations. Izv.
AN SSSR Mekh. i mashinostr. no.4:143-145 Jl-Ag '64

L 5024-65   EED-2/EBO-2/EE (k)-2/EWG(v)/EWA(c)/EWT(d)/EWA(c)/FSS-2   Ps-5/Pg-4/
Pk-4/Pl-4/Pn-4/Po-4/Pq-4   BC

ACCESSION NR: AP5002693   S/0280/64/000/006/0172/0179

AUTHOR: Kuzovkov, N. T. (Moscow)

TITLE: Stability of servoed gyroscopic stabilizers at a high gain

SOURCE: AN SSSR, Izvestiya, Tekhnicheskaya kibernetika, no. 6, 1964, 172-179

TOPIC TAGS: gyro stabilizer, gyro stabilizer stability

ABSTRACT: Differentiating and integrating (equivalent-diagram) corrective loops
are compared as to the size of their respective stability regions and the rate of
damping of free oscillations in a single-axis servoed gyro stabilizer where the
loops are used. The operation of a single-axis stabilizer is analyzed, and
methods for ensuring stabilization are considered. With a high gain, the best
means for stabilizing the system is the introduction of electric corrective loops,
they do not impair the static accuracy. An original method is given for plotting
equivalent damping lines and equivalent real-root lines. It is found that the

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inertial corrective loop has essential advantages ... the differ corrective loop ... the viewpoint of maximum permissible gain and quickest damping. Ork. art. has. 7 figures, 12 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 29Dec63   ENCL: 00   SUB CODE: NG

NO REF SOV: 004   OTHER: 000

Card 2/2

KUZOVIO', N.T. (Moskva)

Two-axis gyro-stabilized platform with a moving base. Izv. AN
SSSR. Tekh. kib. no.3:174-182 Je '64.

(MIRA 17:10)

15032-66
ACC NR: AP   EWT(d)

AP6002156

$^{(q)}$/EWP(v)/EWP(k)/EWP(h)/EWP(1)

AUTHOR: Kuzovkov, N. T. (Moscow)

ORG: none

SOURCE CODE: UR/0280/65/000/006/0131/0139

TITLE: Adaptive systems with a phase-shift evaluation of damping

ABSTRACT: A new principle is suggested of adapting closed-loop automatic-control systems to a specified or maximum possible damping factor ξ of free oscillations. The current value of ξ is evaluated from the phase shift between a system coordinate x and its derivative $\dot{x}$, and the system open-loop gain K is adjusted according to this evaluation. The principle is claimed to be applicable not only to systems with monotonously decreasing $\xi = f(x)$ characteristics but also to closed-loop systems having the ξ characteristic with one maximum; in the latter case, an immediate reversal of the actuating motor, after the maximum point has been passed is recommended. Filtration of x and $\dot{x}$ signals is advised to eliminate the effects of

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ACC NR: AP6002156

external disturbances. An experimental verification of the above principle on an automatic system stabilizing the angular position of a swivel table (with cycling simulated) is claimed. Orig. art. has: 9 figures and 7 formulas.

SUB CODE: 13 / SUBM DATE: 16Nov64 / ORIG REF: 003 / OTH REF: 001

Card 2/2

SOV/68-58-2-5,'20

AUTHORS: Gryaznov, N.S., Fel'dbrin, M.G. and Kuzovkov, B.S.

TITLE: Coking of Preliminary Pre-heated Coal Blend (Koksovaniye predvaritel'no nagretoy ugol'noy shikhty)

PERIODICAL: Koks i Khimiya, 1959, Nr 2, pp 17 - 20 (USSR)

ABSTRACT: The influence of a preliminary pre-heating of the coal charge on the characteristic features of the coking process and the quality of coke produced was investigated. A blend from Kuznets coals, used on the Chelyabinsk Metallurgical Works, in which a part of the fat coal replaced by gas coal of the following composition was used for the investigation, %: KZh - 41, Zhl - 17, Gl - 11, K2 - 31. The blend was crushed in the usual manner to 93% of - 3 mm fraction. Pre-heating was done in a rotating drum placed in a ring furnace. The coking was done in an electrically heated oven, 400 mm wide of a capacity of 180 kg. The temperature of the surface of oven walls at the end of coking was 1 080 $^\circ$C and at the tar line plane 950 $^\circ$C. The hot blend was charged directly from the pre-heating drum. Changes in the bulk density and rate of flow (from a special bunker with an outlet 40 mm in diameter) of pre-heated blend were determined (Table 1) - both attained maximum value at a pre-heating temperature

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Coking of Preliminary Re-heated Coal Blend

SOV/68-58-2-5/20

of 200 $^\circ$C. Pre-heating of the blend to a temperature above 200 $^\circ$C is unprofitable as the bulk density and the rate of flow decrease due to the beginning of thermal decomposition. Changes in the volatile content, thickness of the plastic layer and apparent viscosity with pre-heating temperature are given in Table 2 and Figure 1. A decrease in the fluidity of the plastic mass begins after pre-heating to 204 $^\circ$C. The temperature gradient during coking was measured with 4 thermocouples placed in one half of the oven. With increasing pre-heating temperature the mean coking velocity increases but the individual layers of the charge carbonise at a rate sharply different from the mean rate. Changes in the heating rate of ordinary and pre-heated charges during the plasticity period at various distances from the wall are given in Table 3 and changes in the thickness of the plastic layer during its movement towards the tar line plane in Figure 2. The quality of the coke produced from ordinary blend and pre-heated to various temperatures is compared in Table 4. On pre-heating of charge up to 200 $^\circ$C, the

Card2/3 quality of the coke improves, but with pre-heating to a

Coking of Preliminary Pre-heated Coal Blend   SOV/68-58-2-5/20

higher temperature the quality of the coke deteriorates. It is concluded that pre-heating of the coal charge improves the quality of metallurgical coke and increases the throughput of the coke ovens by approximately 35%. Pre-heating of the coal charge within a range up to 200 ^{o}C is advantageous. There are 2 figures, 4 tables and 7 Soviet references.

ASSOCIATION: VUKhIN

Card 3/3

AUTHOR: Kuzovkov, V. F.

TITLE: Computation of strongly saturated magnetic systems with large air gaps

TOPIC TAGS: saturated magnetic system, magnetic air gap, magnetic field
computation, magnetic field modeling

ABSTRACT: In the present work, an attempt is made of developing a method of
computation of the magnetic field in ferro-magnetic sections of a magnetic con-
ductor of high degree of saturation, having large air gaps. This attempt was
prompted by recent developments of energy transformers. E. M. Sivel'nikov
and O. V. Tozoni (Trudy* Novocherkasskogo polyt. inst. v. 43/57, 1956) develop-

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L 16165-65
ACCESSION NR: AT4045643

ed a modeling method for the magnetic field in the air gap of a nonsaturated d. c.
electrical machines. in which they represent the actual field as a superposition
of two fields: that of a whirl field produced in a homogeneous medium by the cur-
rent in the excitation coils, and of the magnetic field produced by the molecular
currents in steel. The first field is found analytically, the second with modeling.
The present author extends their method to the case of magnetic saturation.
Orig. art. has: 5 tables, 29 equations

ASSOCIATION: None

SUBMITTED: 22Feb63   ENCL: 00

SUB CODE: EM, EE   NO REF SOV: 005   OTHER: 000

Card 2/2

1. Solder for aluminium. V. M. Kuzorkov and A. P. Fomin.
U. S. P. 106,686 Aug 28, 1957. A solder contg. Zn 46

Another compn. for the same purpose contains Zn 40
and Ag 1 2% and the rest Sn.   M. Hoseh

SOV/121-58-10-19/25

AUTHOR: Kuzovkov, V.M.

TITLE: Barrel-Shaped Rollers for the Rolling-on of Knurls
            and the Method of their Manufacture (Bochkoobrazn'yye
            roliki dlya nakatyvaniya rifleniy i metod ikh
            izgotovleniya)

PERIODICAL: Stanki i Instrument, 1958, Nr 10, pp 39-40 (USSR)

ABSTRACT: Barreled rollers for knurling operations are used at
            the Izhora Works (Izhorzkiy Zavod) "Imeni Zhdanov".
            In making these rollers, after turning the barrels
            the teeth are milled with a special cutter having
            internal teeth which is clamped in a three-jaw collet
            of a lathe. The roller is placed on a special holder
            clamped on the lathe tool post. Straight or helical
            teeth can be cut. A wooden lap is also shown for
            finishing the roller teeth. There are 5 illustrations.

Card 1/1

KUZOVKOVA N.I.

AUTHOR: Panovko, V. N., Engineer

TITLE: All-Union Conference on the hardfacing of dies for hot and cold press-forming

(16)

PERIODICAL: Svarochnoye proizvodstvo, no. 3, 1963, 44 - 45

TEXT: The First All-Union Scientific-Technical Conference on hardfacing of dies was held at Volgograd from November 27 - 29, 1962. The Conference heard the following reports: N. T. Prosvirov (VNIIPTMASh) on "Operational conditions and the type of forging dies"; L. A. Pozdnyakova (ENIKMASh) on "Problems of the durability of dies and press-forming steels"; V. A. Popov, ENIKMASh, on some structural peculiarities of carbide tools for cold extrusion and upsetting; I. I. Frumin, B. V. Danil'chenko (Institute of Electric Welding imeni Ye. O. Paton) on "Electric-slag hardfacing of some dies"; L. Kolomiets (IES imeni Ye. O. Paton) on "Reconditioning of dies by electric-slag hardfacing"; V. A. Timchenko (IES imeni Ye. O. Paton) on "A machine with program control for automatic hardfacing of forging dies"; Reports on manual arc-hardfacing of dies were delivered by N. V. Popov (Volgograd Tractor Plant), V. M. Panovko and Ye. O. Bloshkin (Moscow Experimental Welding Plant); O. D. Superko (Chelyabinsk Tractor Plant), N. I. Nikolko (Ural Heavy Machinebuilding Plant), P. M. Sapov ("Rostsel-mash"), N. I. Kuzovkova (GAZ), Yu. P. Zaytsev (ENIKMASh), V. I. Il'yin (ZIL), Gopdvin (Khar'kov "Svet shakhtera" Plant), and others. In a decision the Conference mentioned deficiencies connected with the subject, i.e. lack of unified electrodes; of centralized production; of unified technological instructions on the hardfacing of dies; of methods for evaluating the quality of hardfaced metal, and lack of high-quality electrodes for hardfacing cast-iron dies. The Conference decided to take steps in order to eliminate the aforementioned deficiencies.

KUZOVKOVA, O. A., CHEVOTAREV, A. K.

"Experience of improving the sanitary conditions of workers on cattle-breeding sovkhozes unsafe in regard to brucellosis."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

GUSEVA, N.A.; BEZUMNOVA, F.I.; KUZOVKOVA, O.A.; ROMANENKO, V.V.

Outbreak of leptospirosis among residents of the village of
Karalat, in Kamyziaksk District of Astrakhan Province. Zhur.
mikrobiol. epid. i immun. 32 no.5:119-121 My '61. (MIRA 14:6)

1. Iz Astrakhanskoy oblastnoy sanitarno-epidemiologicheskoy stantsii;
        (KARALAT (ASTRAKHAN PROVINCE)--LEPTOSPIROSIS)

KUZOVKOVA, Ye.S.

Treatment of tuberculous meningitis without subarachnoid adminis-
tration of streptomycin. Sov.med. 23 no.11:109-112 N '59.
(MIRA 13:3)

1. Iz tuberkuleznogo otdeleniya Kalushskoy gorodskoy detskoy bol'-
nitsy.
(TUBERCULOSIS MENINGEAL   therapy)

FRENKEL!, I. L., kand. med. nauk; GOTLIB, V. O.; KUZOVKOVA, Ye. S.

Mass prevention and treatment of rickets with maximum doses of vitamin D in Kaluga Province. Pediatriia no.4:52-54 '62.
(MIRA 15:4)

1. Iz Kaluzhskogo obladravotdela (zav. N. G. Afanas'yeva) i Kaluzhskoy detskoy bol'nitsy (glavnyy vrach V. O. Gotlib)

(KALUGA PROVINCE—RICKETS)   (VITAMINS—D)

systems containing undamped vibrational links, by the method of logarithmic frequency characteristics (in Russian), Uch. zap. Mosk. un-ta no. 172, Mechanics 5, 207-213, 1954; Ref. Zh. Mekh. no. 12, 1956, Rev. 6059.

The possibility is indicated of applying the Nyquist hodograph, and modifications thereof, to systems containing undamped, vibrational links (a pair of purely imaginary roots). By suitably tracing the poles of the transitional function located on the imaginary axis, it is possible to construct a phase-amplitude hodograph, the orientation whereof to the point (0-1) in the usual manner forms a criterion of stability. An example is examined of the steadiness of a gyro-stabilized platform. In the equations of motion whereof, the terms corresponding to viscous friction are eliminated.

L. A. Rozenberg

Courtesy Referativnyi Zhurnal, USSR
Translation, courtesy Ministry of Supply, England

KUZOVLEV, A.D.

Origin of the Sanar crater.   Izv.AN SSSR. Ser.geol. no.3:131-134 My-Je '53.
                                                        (MLRA 6:6)
                              (Sanar Valley--Geology, Structural)

GRIZHENYA, I.F., inzh.; KUZOVLEV, A.I., inzh.; KAZANSKIY, V.V., inzh.;
        GALKIN, A.S., inzh.

    Blast furnace gas purification in the making of ferromanganese.
    Stal' 22 no.1:89-92 Ja '62.   (MIRA 14:12)

    1. Kosogorskiy metallurgicheskiy zavod i Yuvenergochermet.
                    (Ferromanganese--Metallurgy)
                      (Gases--Purification)

KONDRATOVA, K.G.; KUZOVLEV, A.I.; GUREVICH, E.Ye.; MALEINA, A.P.;
        MATROSOVA, N.I.

Rendering cyanide in waste waters harmless with liquid chlorine.
Stal' 24 no.10:946   O '64.   (MIRA 17:12)

1. Kosogorskiy metallurgicheskiy zavod.

KUZOVLEV, A. K.

Centrifuge for coarsely dispersed suspensions. A. K. Kuzovlev. U.S.S.R. 106,749, July 25, 1957. A centrifuge for thickening, classifying, or clarifying suspensions of coarse particles consists of a drum rotating on a vertical axis inside a chamber with which it communicates through apertures in the drum's peripheral wall. The inside of the drum is divided by a diaphragm into 2 zones, one of which forces the suspension centrifugally into the surrounding chamber and the other which forces the finely dispersed particles or the cleared liquid out of the chamber into the

KUZOVLEV, A. K.

Central Asian Geological and Mineral Raw Materials Institute

"Tests of a new type of turbocyclone"

report presented at the 4th Scientific and Technical Session of the Mekhanobr Inst, Leningrad, 15-18 July 1958

KUZOVLEV, A.K.

Centrifuge (turbocyclone) for thickening, classifying or clarifying coarsely dispersed suspensions. Gor. zhur. no.10:72 O '58.
(Separators (Machines)--Patents)   (MIRA 11:10)

SOV/127-59-4-18/27

AUTHOR: Kuzovlev,A.K., Engineer

TITLE: The Centrifugal Classification of Mineral Sus-
              pensions in Turbo-Cyclones.
              (Tsentrobezhnaya klassifikatsiya mineral'nykh
              suspenziy na turbotsiklonakh)

PERIODICAL: Gornyy zhurnal, 1959, Nr 4, pp 65-68   (USSR)

ABSTRACT: The author describes different types of hydrocy-
              clones, centryclones and feed-screw centrifuges
              presently used at home and abroad in concentration
              plants. He finds that the hydro- and turbocyclones
              do not give an exact classification of the sus-
              pension, as about 20% of the coarse-grained frac-
              tion is carried away. The feed-screw centrifuges,
              guarantying a correct classification, are struc-
              turally too complicated and are quickly worn-
              out by mineral suspensions. The new centrifugal
              classifiers - drum turbocyclones - are of a
Card 1/2   simple construction and give excellent classi-
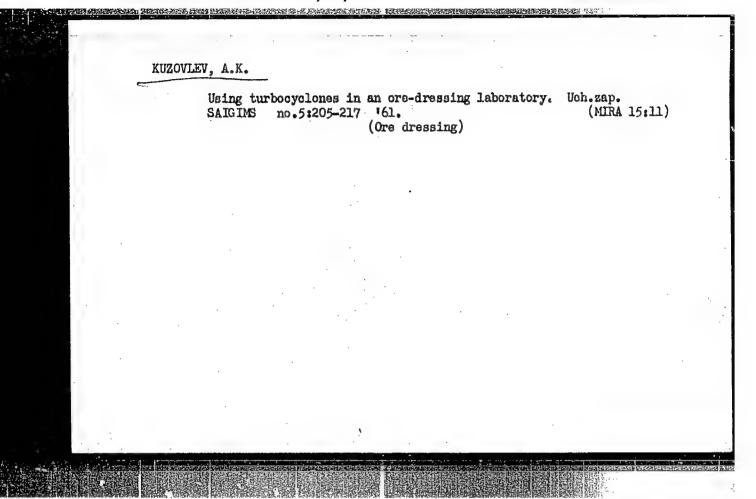
SOV/127-59-4-18/27

The Centrifugal Classification of Mineral Suspensions in Turbo-Cyclones.

fication results. In this category the author gives a detailed description of the TTs-1D turbo-cyclone with a bi-zonal turbine, developed by the author (author's certificate Nr 106749; May 27, 1957). The turbocyclone was built at the Ufimskiy zavod gornogo oborudovaniya (the Ufa Plant of Mining Equipment) and underwent industrial tests by Uralmekhanobr and the Uralzoloto Trust. The results of the tests are described in detail. There are 2 tables, 2 graphs, 1 photo and 1 diagram.

ASSOCIATION: Sredne-Aziatskiy institut geologii i mineral'-nogo syr'ya. (The Central-Asian Institute of Geology and Mineral Raw Material), Tashkent.

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KUZOVLEV, A.K.

Using turbocyclones in an ore-dressing laboratory. Uch.zap.
SAIGIMS   no.5:205-217 '61.   (MIRA 15:11)
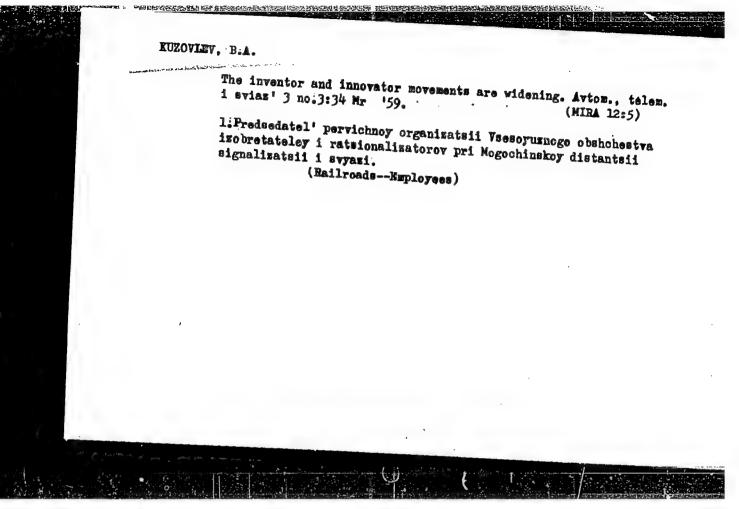   (Ore dressing)

KUZOVLEV, B.A., starshiy elektromekhanik

Operation schedule for storage batteries. Avtom.,telem. i sviaz' 3
no.2:22-24 F '59.   (MIRA 12:4)

1. Dom svyazi stantsii Mogocha Amurskoy dorogi.
                         (Storage batteries)

KUZOVLEV, B.A.

The inventor and innovator movements are widening. Avtom., telem.
i sviaz' 3 no.3:34 Mr '59.
(MIRA 12:5)

1.Predsedatel' pervichnoy organizatsii Vsesoyuznogo obshchestva
izobretateley i ratsionalizatorov pri Mogochinskoy distantsii
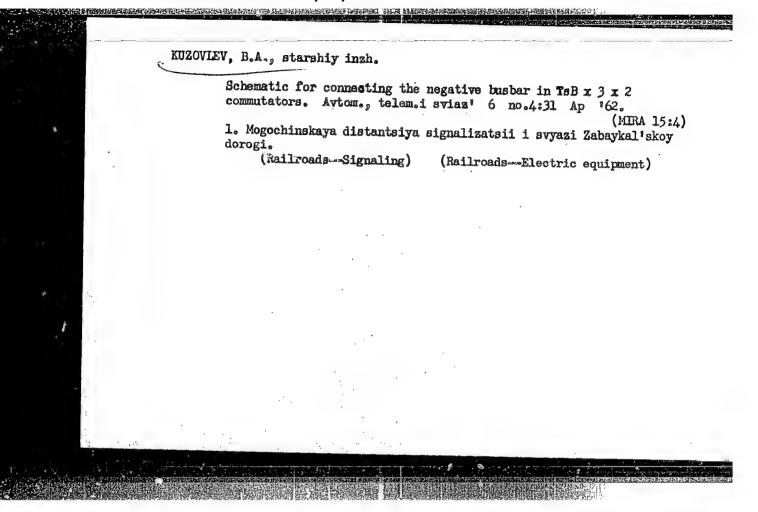signalizatsii i svyazi.
(Railroads--Employees)

KUZOVLEV, B.A.

We are using electric power efficiently. Avtom., telem.i
sviaz' 4 no.6:21-23 Je '60.   (MIRA 13:7)

1. Starshiy elektromekhanik uzla svyazi stantsii Mogocha
Zabaykal'skoy dorogi.
      (Railroads) (Electric power)

KUZOVLEV, B.A., starshiy elektromekhanik

Connecting an RPU relay through a bridge rectifier. Avtom., telem.
i sviaz' 5 no.3:32 Mr '61.   (MIRA 14:9)

1. Mogochinskaya distantsiya signalizatsii i svyazi Zabaykal'skoy
dorogi.
                (Railroads—Communication systems)

KUZOVLEV, B.A., starshiy inzh.

Schematic for connecting the negative busbar in TsB x 3 x 2
commutators. Avtom., telem.i sviaz' 6 no.4:31 Ap '62.

(MIRA 15:4)

1. Mogochinskaya distantsiya signalizatsii i svyazi Zabaykal'skoy
dorogi.

(Railroads—Signaling)   (Railroads—Electric equipment)
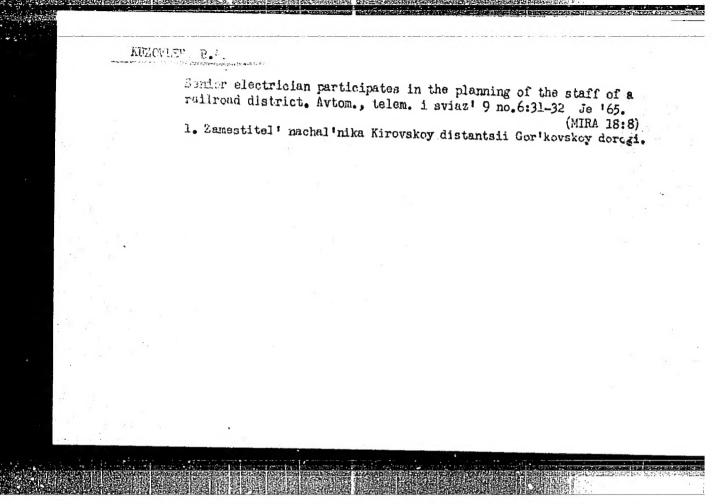
KUZOVLEV, B.A.

Formula to be used. Avtom., telem. i sviaz' 7 no.6:41-42
Je '63.   (MIRA 17:3)

1. Starshiy inzh. Mogochinskoy distantsii signalizatsii i
svyazi Zabaykal'skoy dorogi.

KUZOVLEV, B.A., inzh.

Electric power supply of communication stations without counter e.m.f. cells. Avtom., telem. 1 sviaz' 8 no.11:34-35 N '64.

(MIRA 17:12)

KOZLOV, R. A.

Senior electrician participates in the planning of the staff of a railroad district. Avtom., telem. i sviaz' 9 no.6:31-32 Je '65.
(MIRA 18:8)

1. Zamestitel' nachal'nika Kirovskoy distantsii Gor'kovskoy dorogi.

1. KUZOVLEV, G., Eng.

2. USSR (600)

4. Hydraulic Engineering

7. Stone buffers of particable dimensions to relieve the tension from supporting walls, Mor. flot 13 No, 1,1953

9. <u>Monthly List of Russian Accessions</u>, Library of Congress, ___May___ 1953. Unclassified.

KUZOVLEV, G. M. inzhener.

Notes on the book "Planning hydraulic structures." Gidr. stroi.
26 no.2:46-47 F '57.
(Hydraulic engineering)   (MIRA 10:4)

KUZOVLEV, G.M.

AUTHOR: Kuzovlev, G.M., Engineer

98-58-3-6/22

TITLE: An Earth Dam on a Weak Muddy Foundation (Zemlyanaya plotina na slabom ilistom osnovanii)

PERIODICAL: Gidrotekhnicheskoye Stroitel'stvo, 1958, Nr 3, pp 23-25 (USSR)

ABSTRACT: The article deals with the construction of an earth dam under water pressure of 7 m, and standing on weak muddy soil. The composition of the soil is evident from figure 1. The width of the muddy stratum mixed with peat goes from 0 at the banks to 4 to 5 m in the middle of the valley. The upper layer is richer in peat than the lower one. Under the mud there is fine and coarse grain sand. The coefficient of porosity, taken by means of 3 bore holes, is shown in the following figures: Nr 1 - 67%, Nr 2 - 113.4% and Nr 3 - 54%. A cross section of the earth dam is shown on figure 2; the lower slant is steeper than the upper slant. The calculated maximum sag of the dam was accepted to be 35% of the width of the peat/mud stratum, or 1.9 m according to the project. The dam was built from dry medium-fine sand which favored the process of sagging and the displacement of water from the bottom. The construction of the dam was carried out by bulldozers and MAZ-205 trucks, without any rollers. Some parts

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